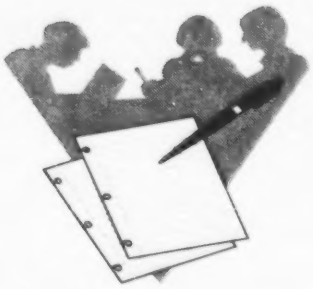
Province Wide Services

FUNDING PROCEDURES AND DEFINITIONS MANUAL



Alberta
HEALTH AND WELLNESS

Province Wide Services
Advisory Committee
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PWS Funding Procedures and Definitions Manual

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Province Wide Services

FUNDING PROCEDURES AND DEFINITIONS MANUAL

OVERVIEW

The health services provided by Alberta's seventeen regional health authorities are funded primarily from general population-based block funding provided to each region from the Provincial Government.

In addition to these general regional health services, there is a small range of services designated as *Province Wide Services*. Because of their generally high-tech, high-cost and highly specialized nature, the Province Wide Services cannot be provided in most health regions efficiently, safely or at an appropriate level of quality. These services require a sufficient number of cases to sustain provider competence and sophisticated support services in terms of equipment and facilities. Thus, Province Wide Services are provided only by the Edmonton and Calgary health authorities, but accessed by all Albertans. These services include heart surgeries, organ and bone marrow transplants, renal dialysis, neurosurgery, selective cancer treatments, intensive care for severely ill infants, and patients with severe trauma or burns. The separation of Province Wide Services from population based regional funding and the import-export calculations also eliminates the financial risk for smaller rural regions associated with these high cost and often highly variable services.

Province Wide Services are funded on an item by item basis. Because of the nature of the province-wide health services, it is important to keep a careful watch on their growth and cost. These services are often the only solution to life-threatening illnesses or injuries, and offer the best chance of recovery and of improving the quality of life for many Albertans. However, these services also tend to be very high cost, and with growth in many cases exceeding all other basic health services. Province Wide Services could expand to consume more and more of the available health dollars, reducing the money available to support other health services across the province, including funding that could be used to prevent some of the illnesses which are treated through Province Wide Services.

A clear process has been put in place for funding Province Wide Services. The purpose of this manual is to describe as precisely as possible the various PWS funding policies and procedures which have been developed.

THE PROVINCE WIDE SERVICES ADVISORY COMMITTEE

Central to decision making for PWS funding is the ministerial Province Wide Services Advisory Committee (PWSAC).

PWSAC was established in 1997 as a management committee, responsible for providing a continuing review of Province Wide Services and developing recommendations to the Minister of Health and Wellness on the PWS budget.

Advice by the PWSAC must reflect the knowledge and expertise of the service providers. Rural RHA participation is essential to developing a truly provincial perspective. Membership on the Advisory Committee therefore includes:

- five representatives from each of the Capital and Calgary Regional Health Authorities, including the Chief Executive Officer, the Chief Operating Officer, the Senior Financial Officer and the Chief Clinical/Medical Officer
- three representatives of other regional health authorities (one each from the north, south and central regions), appointed by the Provincial Health Authorities of Alberta
- the deans of the two Faculties of Medicine (Edmonton and Calgary)
- chair person appointed by the Minister
- support staff from Alberta Health and Wellness
- note: Albert Cancer Board membership is currently under consideration

The PWSAC is presently chaired by Dr. Clarence Guenter, and meets on a regular basis - four or five times a year. Committee members are listed in **Appendix A**.

The Advisory Committee was specifically mandated to:

- annually review designated province-wide services to determine whether they should continue to be included, or expanded or reduced
- establish a mechanism for the assessment of new technology (drugs, procedures and devices) related to province-wide services, and advise the Minister on approval and funding
- identify emerging province-wide services and ensure the development of action plans leading to their successful introduction into the province

- ensure the development of systems of accountability that will measure the effectiveness of province-wide services on the basis of criteria for intervention, access, cost, and quality as compared to best practice or previously developed goals

- develop recommendations for target service volumes and appropriate funding for Province Wide Services.

In January 1999, the Minister of Health and Wellness directed that the primary focus of the PWSAC should shift from the PWS inventory, to tidying up some of the areas (e.g. pre and post transplant services), managing better what currently exists (e.g. analysis of PWS inpatient outliers), and addressing issues of best practices for criteria, outcomes and cost. Since its beginning, the PWSAC has also been instructed to promote cooperation among the RHAs in achieving its mandate.

The PWSAC is supported by the Funding Methodology Working Group, which is mandated to provide support and advice to the PWSAC on PWS funding methodology issues.

PWS specialty task groups (including cardiovascular, renal, organ donation and transplantation) were also intended to act as a resource to the PWSAC. It was agreed in 1997 that these expert groups, representing both the CHA and CRHA, should be established and managed by those RHAs.

The PWSAC makes funding recommendations to the Minister, but final decisions on funding are made by the Minister and his or her department, taking into consideration the fiscal circumstances of Government and competing budget demands.

Annual activities and outcomes of the PWSAC are to be reflected in the PWSAC Annual Report. Alberta Health and Wellness drafts the annual report which is reviewed and approved by the PWSAC with a target completion date of calendar year end.

THE PROVINCE WIDE SERVICES BASKET

A. Current (2000-01) PWS Basket

➢ Inpatient Services

The specific Refinement Group Numbers funded in each area below are listed in ***Appendix B.***

Organ and Bone Marrow Transplants:

- heart
- kidney
- kidney/pancreas
- liver
- lung
- bone marrow

Trauma and Burns:

- craniotomy for trauma
- traumatic stupor and coma
- limb reattachment, hip and femur procedures for multiple trauma
- extensive burns
- non-extensive burns with skin graft with major/catastrophic complication comorbidity

Neurosurgery:

- craniotomies
- spinal procedures
- adrenal and pituitary procedures

Cardiovascular:

- cardiac valve procedures
- coronary bypasses
- angioplasties
- major cardiovascular procedures
- other cardiothoracic procedures

Neonatology:

- low birth weight

Oncology:

- pancreas, liver and shunt procedures with catastrophic complication comorbidity
- pelvic evisceration, radical hysterectomy and radical vulvectomy
- acute leukemia without major O.R. procedure
- radiotherapy
- chemotherapy with acute leukemia as secondary diagnosis

➢ **Clinics and Home Services**

- dialysis and renal program
- Human Organ Procurement and Exchange Program (HOPE)
- other pre and post transplant services
- medical genetics
- cancer genetics
- HIV clinics
- Poison and Drug Information Services (PADIS)
- Home Enteral Nutrition Therapy
- Perinatal Outreach
- COMPRU (osseointegration component)
- children with complex healthcare needs
- pediatric transport
- sleep disorders advanced diagnosis (Level 1 testing)
- pediatric and neonatal Extra-Corporeal Life Support (ECLS)

➢ **High-Cost Drugs**

- cyclosporine, tacrolimus, mycophenolate, azathioprine, OKT-3 and ATGAM (immunosuppressants)
- ondansetron and neupogen (bone marrow transplants)
- AZT, 3TC and Protease Inhibitors (HIV-antiretrovirals)
- human growth hormone (pediatric chronic renal failure and growth hormone deficiency)
- pulmozyme (cystic fibrosis)
- flolan (primary pulmonary hypertension)

➢ **High-Cost Devices**

- implanted cardiac defibrillators (ICDs)
- cranioplasty devices
- cochlear implants

- **Continuous Positive Airway Pressure (CPAP) devices**
- A **Teaching and Research** allocation compensates both CHA and CRHA for the higher average costs per case (in-patient and out-patient) associated with the additional costs incurred by their teaching hospitals.
- An **Equipment** allocation covers the regular replacement of the existing stock of equipment used to deliver PWS services and for additional equipment to meet growing demand.

B. Additions to Province Wide Services - Process

Given the rapid technological developments occurring in the health field, there is a continual need for reviewing new procedures, technology and high cost drugs for approval/disapproval as Province Wide Services. The intervention considered may be new to Alberta's publicly funded health system, or it may already be funded but outside of Province Wide Services.

1. PWS Proposals (Non-Drugs)

a. PWS Qualifying Criteria

The first step towards PWS approval is that a service or intervention is assessed in the health field as being important to health care in Alberta, and as meeting the definition/qualifying criteria for Province Wide Services.

Province Wide Services funding is not meant to cover all province-wide programs, or to provide an avenue for the funding of new technologies. The objective of PWS funding is to cover a narrow band of important services that, because of their high costs, complexity and/or relatively low service volumes, can only be effectively provided at a one or two sites in the province. Because these services require a high level of specialized expertise and collaboration among a variety of practitioners, or have a need for specialized and expensive equipment, smaller regional health authorities should not be expected to provide these services.

To qualify for PWS funding, a service or intervention must be **deemed important and provided only in CHA and/or CRHA because of the need for specialization**, but **utilized on a reasonably comparable basis across all regions**. Only services or interventions provided to Albertans can be covered. Also, PWS funding supports selected "*services*" rather than "*programs*".

Funding can also cover the services necessary to support the specialized services (i.e. **the full episode of care**). In some cases the inpatient component of a PWS service represents only one component of the continuum of a service. Pre-inpatient services or post-inpatient follow-up may be required, and these services may also qualify for PWS funding, provided the services are directly related to the specialized PWS service but are not already included in the cost weights for that service, they are unique to CHA and/or CRHA but available to all Albertans, and the activities and costs are trackable. Care is also taken to ensure the pre and post service costs are not being separately captured through the outpatient dataset (ACCS – Ambulatory Care Classification System) used in population based funding and import/export funding adjustment.

b. CRHA/CHA Coordination

All proposals to the PWSAC for PWS funding must be channeled through the CRHA/CHA, who prioritize the various proposals for new Province Wide Services and deal with the most important. In this unique resource role, CHA and CRHA are to operate with a provincial focus. CRHA and CHA are also to collaborate in terms of the optimal delivery of potential new services - whether CHA or CRHA, or both, should provide the service.

Alberta Health and Wellness supports this process by referring to CHA/CRHA individuals or groups making requests directly to the Department for new Province Wide Services. Alberta Health and Wellness may also request CHA/CRHA to prepare proposals for new Province Wide Services where it observes Albertans are leaving the province for services reimbursed through out-of-province claims, but which potentially could be provided in Alberta as a Province Wide Service.

c. CRHA/CHA Joint Proposal

Based on the outcome of their evaluations, a joint CHA/CRHA budget proposal for a new PWS service/intervention may be submitted to the Province-Wide Services Advisory Committee. The proposal should include expected outcomes and alternative treatments if the service/intervention is not approved. The specific proposal requirements are outlined in **Appendix C**.

d. PWSAC Review and Recommendation

The Province Wide Services Advisory Committee reviews the joint CHA/CRHA proposal, and evaluates the potential for PWS funding. To assist in this evaluation, the PWSAC may establish a task group, including committee members and clinical experts, to consider all aspects of the proposal and make recommendations. A technology assessment may also be sought for new technologies. Rural

representation on PWSAC contributes an important rural region viewpoint on the proposal's importance and eligibility for PWS funding.

New procedures, technologies or devices that are deemed important to health care in Alberta and satisfy Province Wide Services criteria, are recommended to the Minister for inclusion in Province Wide Services, along with the recommended number of interventions and funding parameters. Recommended funding for new services/interventions should take into consideration budget savings in other areas of PWS or the health system, and current out-of-province costs associated with patients going elsewhere to receive the intervention.

e. Ministerial Approval / Disapproval

Final funding determination for a recommended service/intervention is determined by Alberta Health and Wellness. The decision is communicated to the regional health authorities by Alberta Health and Wellness.

2. New Drug Proposals

a. PWS Qualifying Criteria

For a particular drug to be considered for PWS High Cost Drug funding, the drug in question should meet **ALL** of the following criteria:

- ✓ directly related to disease conditions or interventions already in the PWS inventory
- ✓ high cost
- ✓ disbursed out of CHA and/or CRHA on an outpatient basis (inpatient drugs are included in the PWS inpatient cost weights)
- ✓ only services or interventions provided to Albertans can be covered
- ✓ the drug is accessible by all Albertans
- ✓ the drug costs are not captured in the ACC[illegible] outpatient costs which are used in population based funding and import/export funding adjustments.

b. CRHA/CHA Coordination

All proposals for PWS funding must be submitted by CRHA/CHA. The physician or group proposing coverage of a drug must therefore initiate a request through the regional Pharmacy and Therapeutics (P & T) Committees in the CHA and/or CRHA. The role of the P & T Committees is to verify and approve the legitimacy of a drug for clinical use and as a possible PWS High Cost Drug, and determine some level of priority relative to other items under consideration.

c. CRHA/CHA Joint Proposal

If the P & T Committee approves the clinical, therapeutic and economic advantages of the drug, the PWS High Cost Drug Evaluation Sheet (**Appendix D**) is completed and jointly submitted by CRHA/CHA to PWSAC as part of a new drug budget proposal. In addition to the High Cost Drug Evaluation Sheet, the proposal should include:

- ✓ qualifying PWS criteria
- ✓ literature review (provide a couple of key and recent articles or papers)
- ✓ estimated number of patients that will receive the drug
- ✓ alternative treatments if the drug is not approved

d. PWSAC Initial Review

The Province Wide Services Advisory Committee performs an initial review of the joint CHA/CRHA proposal.

e. Request for ECDET Review

If PWSAC does not have enough information to make the necessary evaluation of a drug's suitability for PWS funding, it can request the Alberta Health and Wellness Expert Committee on Drug Evaluation and Therapeutics (ECDET) - the Minister's external expert drug advisory committee - to conduct a further review of the drug's efficacy. ECDET's basic mandate is to recommend to the Minister drug products which the Minister may consider for inclusion in publicly funded drug programs (including PWS drugs), and advise the Minister of the conditions, if any, under which such products should be funded. The request to the ECDET should clearly specify the questions relevant to PWS – e.g. how well does the drug work? compared to what? at what cost?

The request for ECDET review is sent from the PWSAC Chair to the Pharmaceutical Policy and Programs Branch (Alberta Health and Wellness), which then forwards the PWSAC request to ECDET and Alberta Blue Cross which provides scientific and administrative support to the Expert Committee.

f. ECDET Review

ECDET considers the scientific, therapeutic, clinical and socio-economic merits of the proposed PWS drug product, and develops the necessary information. When needed, ECDET receives advice and assistance from external consultants and agencies. If deemed appropriate, the pharmaceutical manufacturers may be contacted for further information by the scientific advisors at Alberta Blue Cross.

The ECDET evaluation and recommendation(s) are forwarded to the PWSAC chair and to Health Resourcing (Alberta Health and Wellness) via a letter from the Pharmaceutical Policy and Programs Branch. Health Resourcing forwards the information to the CRHA/CHA.

g. PWSAC Final Review

Taking into consideration the report of the ECDET, PWSAC conducts a final review of the drug proposal before making a funding recommendation to the Minister via a letter from the PWSAC Chair. Drugs that satisfy the criteria for Province Wide Services may be recommended for inclusion in Province Wide Services, along with recommended funding parameters.

h. Ministerial Approval / Disapproval

Health Resourcing notifies, by formal letter, PWSAC members and Pharmaceutical Policy and Programs of the drug's final approval or disapproval. PWSAC members are then responsible for notifying their respective organizations and affiliated entities that would benefit from knowing of the funding decision. Pharmaceutical Policy and Programs is responsible for notifying the ECDET, in writing, of the decision, as well notifying the pharmaceutical manufacturers and community pharmacies.

If the drug is not approved for PWS funding, alternative funding may be considered by Alberta Health and Wellness.

i. Process for New PWS Drugs Between Budget Allocations

New drugs or new drug formulations that become available between annual PWS budget allocations do not necessarily have to wait for the once-a-year PWS funding decisions. If a new drug or formulation substitutes for a currently funded drug with no additional funding implications, then the region can decide to substitute the new drug as a PWS for that fiscal year. In other words, CHA and CRHA can use their existing PWS drug funding pool to pay for a new drug within a given year, provided due diligence is exercised in confirming efficacy and effectiveness. Because CRHA/CHA must fund the drugs from their existing PWS drugs budget, they must make the evaluation as to which drugs are best funded. Such interim decisions should be made transparent to the appropriate stakeholders (Pharmaceutical Manufacturers and Alberta Health and Wellness) by letter. The new drug should then be submitted to the PWSAC for review and funding in future years.

C. Deletions of Province Wide Services

The PWSAC mandate includes an annual review of the current Province Wide Services list to determine whether any should be **removed** from PWS designation. PWS funding for specific items has been discontinued where:

- funding under regional population based funding is more appropriate (e.g. Lithotripsy was transferred to population based funding in 1999-00)

- costs are included in the PWS inpatient cost weights (e.g. REOPRO drug in 1999-00)

- procedures are not unique to CHA/CRHA (e.g. cardiac congenital and valvular disorders - inpatient RGNs 1350-1352 - were deleted from 1999-00 PWS funding because these procedures are performed by all seventeen regional health authorities).

D. Inpatient Grouper Impacts

Hospital inpatient activity data is extracted from the *hospital morbidity file* - all acute care facilities in Alberta report monthly inpatient separations (about 340,000 records annually) through a standard set of data elements. Funding for PWS inpatient services is based on grouped inpatient activity. Data management requires that the large number of activity records are grouped into similar patient types. Alberta groups the inpatient stays into RGNs (Refinement Group Numbers) using the RDRG (Refined Diagnosis Related Grouping) methodology. The current PWS inpatient funding list consists of 107 RGNs.

1. Annual Changes Within the Grouper

Because PWS inpatient funding is determined for grouped hospital services (RGNs), the PWS basket is affected by changes which occur from year to year in the inpatient service grouper. For example, changes to the RDRG grouper for fiscal year 1999/00 (Version 12.0) will impact on PWS reporting beginning with 1999/00.

If new ADRG groups only pick up previously funded events, it may simply be a matter of including the newly identified RGNs in the funding calculations. For example, as part of the changes to the 1998/99 grouper, angioplasty procedures where a coronary artery stent is inserted, went from ADRG 112 to ADRG 116. Thus, ADRG 116 (with procedure code 36.06) was simply added to the funded PWS

list. However, if new ADRG groups pick up significantly more events, the new ADRGs must be reviewed in terms of appropriateness for PWS funding.

For deleted ADRG groups, if all of the events are not picked up by the newly funded ADRG groups, then an evaluation has to be made of where the deleted ADRGs are being grouped.

2. A New Grouper

In addition to annual changes to the existing grouper, a changeover to a completely new grouper by Alberta will likely occur sometime in the near future. The current RDRG Grouper is based on ICD-9-CM diagnostic coding, and with the upcoming switch to ICD10/CCI Alberta will likely have to move to CIHI's Complexity Grouper. A changeover to a completely new grouper has major implications for Province Wide Services.

A working group with representatives from the regions and Alberta Health and Wellness has been formed to examine and make recommendations on the options and details for grouper implementation and transition. Currently, 114 RGNs constitute the PWS list. A clinical review panel will be needed to develop a comparable list for the new grouper. A crosswalk will also be needed for historical comparison purposes.

3. Trauma RGNs

Some of the PWS inpatient services or interventions are captured very precisely by the RGN groups. Other PWS services are not captured so precisely by the grouper, foremost being the PWS trauma services. Because of how inpatient activity is grouped, the funded PWS trauma RGNs do not appear to meet one of the qualifying criteria for PWS funding – that a service or intervention is provided only in CHA and/or CRHA.

PWS funding is intended to cover certain major trauma services available to all Albertans through the CHA/CRHA tertiary trauma centres. Although regions outside the CHA and CRHA treat trauma cases, they do not have the expertise and support services for major trauma cases.

The grouping of the hospital component of the very severe trauma services provided by CHA/CRHA under the current inpatient grouper has created problems in terms of what trauma services actually get funded and what services are not funded under PWS. This is the result of the major or tertiary trauma inpatient services not grouping neatly into their own discreet RGN cells.

This creates two problems for PWS funding.

First, a review of the 18 trauma RGNs (0020-0023, 0271-0272, 4840-4843, 4850-4853, 4910-4913) currently funded under Province Wide Services, shows that regions other than CHA and CRHA treat some patients grouped to some of these RGNs. In other words, some trauma services may be funded under PWS that should not be funded. This has raised questions about whether CHA and CRHA should continue to receive PWS funding for the PWS trauma RGNs.

On the other side of the coin, however, some of the trauma services that are truly province wide services in nature are not being captured in the current PWS RGN set. However, services not classified as PWS are captured in the import/export regional funding adjustment.

FUNDING DETERMINATIONS

At the beginning of the annual budget cycle, PWSAC develops projected budgets for Province Wide Services, including projected inpatient volumes and unit costs. Services where criteria, activity levels, work loads and costs are not fully defined are carefully considered so that the activity base is not escalated without proper planning. Medical Genetics is an example of an area that requires special attention because of the new and quickly evolving nature of these programs, and incomplete program/outcomes data.

A. PWS Reporting and Database

Setting appropriate targets and allocating funds requires a solid base of information, including current and historical service volumes, units costs, outcomes and comparisons to centres with best practices. Over time an extensive PWS database is being built and maintained by Alberta Health and Wellness. This work is ongoing, and as better information becomes available, the PWSAC uses that information.

Much of the PWS data comes from the CHA/CRHA who are required to **report on PWS activity on a six month interim and an annual basis** to Alberta Health and Wellness for all Province Wide Services. The regional reporting templates are designed to meet PWS funding data needs. New reporting templates must be developed for newly funded services, and existing templates modified on occasion to better meet information requirements (e.g. more activity data by age to assist in the evaluation of performance outcomes). The development of reporting templates is a collaborative effort between Alberta Health and Wellness and the two RHAs.

The base of information (volumes, waiting lists, outcomes, costs, etc.) being developed requires standardized definitions and comparable information for the Capital and Calgary regions. In the past, there were many differences in how services were defined, categorized and reported.

The most critical element of the reporting is the year-end PWS activity data, which has a reporting timeline of July-end (i.e. four months after the year end). The reported inpatient activity received by Alberta Health and Wellness is reconciled with the CIHI Inpatient File (or *hospital morbidity* file).

B. General Funding Considerations

1. Inpatient Volumes

Funding for PWS inpatient services, which accounts for one-half of total PWS funding, is based on projected volumes.

Alberta Health and Wellness projects the initial inpatient volumes, based primarily on **trend extrapolations of historical activity**, taking into consideration any known changes in the underlying volume drivers - growth of at risk population, expanded services, new technology, shifts between types of services, availability of specialized physicians, new facilities (e.g. a new cath lab will have a significant impact on the cardiovascular volumes). Determination of funded volumes for specific services may also consider the following: waiting lists/times, performance/outcome measures (see below), benchmark comparisons with other jurisdictions, and CHA/CRHA equity (see below).

ADRGs (aggregated RGNs) are projected for the inpatient services, and then the projected ADRG totals are distributed by RGN on the basis of the most recent actual distribution – the distribution over the two most recent years for which data is available.

The initial inpatient projections are reviewed by CHA and CRHA, who must make a case for any deviations they expect in the upcoming funding year from the historical growth trend.

Finally, recommended inpatient volumes are also subject to the constraint of available funding.

For PWS clinics and home services, in some cases, particularly where insufficient activity data exist, PWS funding increases may simply be tied to population increases. The population growth rates used in these cases should be consistent with the population growth assumptions used for general regional population-based funding.

CHA/CRHA Equity - Although PWS funding allocations to date have recognized historical differences between the two centres (e.g. CHA does more neurosurgery, while CRHA does more angioplasties), to achieve funding equity between CHA and CRHA an equal population-based allocation is the eventual goal where CHA and CRHA are providing the same service. Where CRHA and CHA are basically serving the same populations with the same service, which is true for many province-wide services, funding should be more-or-less equal.

Performance Outcomes/Benchmarks - The ultimate goal for PWS funding, as directed by the Government, is to allocate resources according to where the best value is received for money spent, i.e. not necessarily where health resources are being utilized, but where they are best utilized.

This is not an easy undertaking. The first step involves defining and collecting the right outcomes measures for PWS activities. Evidence-based decision making requires a determination of which information is necessary to make sound decisions, and then the ability to collect and analyze that information.

Benchmarking with other jurisdictions with best practices can also help in the determination of where resources should be allocated.

One of the key challenges over the next few years in setting appropriate PWS activity levels will be to improve information by tracking service numbers, evaluating outcomes, projecting future demands and comparing best practices. Although much work is needed to develop and assess appropriate outcomes measures and benchmarks, this information is important to determining the "right" number of province-wide services for Alberta. The information will allow regional health authorities and Alberta Health and Wellness to plan and allocate resources where they are needed most.

2. Costs

For PWS services, PWS funding is intended to cover:

- **direct (operating) RHA costs** - e.g. clinical staff wages, medical supplies
- **indirect (overhead) RHA costs**
- **RHA capital equipment costs** (but not physical facility costs).

Service costs (direct and indirect) are to be obtained from the Alberta Costing Partnership where these costs are available and deemed to be of sufficient quality. Where not available, costings are usually provided by CHA/CRHA. There should be some verification of these costs.

For most Province Wide Services, actual service costs are determined from historical data, and then an inflation factor is applied to bring them forward to the funding year. No official inflation factor policy for PWS currently exists, but the factor chosen should take into consideration, where possible, any changed costs due to technology improvements including new drugs.

Capital equipment costs are funded as a separate PWS line item.

a. Inpatient Costs

The Alberta Costing Partnership has been successful in measuring Alberta inpatient costs (direct and indirect costs) for use in the PWS funding determinations. PWSAC recommended (June 1998) using the most recently available Alberta inpatient cost weights, corrected for inflation.

For 1999-00 funding, Alberta costs derived from 1997-98 cost data replaced the costs developed from Foothills Hospital data used previously in the 1997-98 and 1998-99 funding calculations.

For 2000-01 PWS funding, a revised cost definition was employed, incorporating a new definition of the outlier cost portion. Each RGN inpatient cost weight was comprised of the following components:

1. Base Cost: the provincial average trimmed cost, or the average cost of all inlier costed cases (inliers are defined as all cases with an average length of stay equal to or less than the statistically calculated trim point)

2. Outlier Average Cost: for all outlier costed cases, the total cost beyond the average inlier cost, times 90%, divided by the total number of cases (inliers plus outliers)

3. Annual inflation adjustment factors of 2.5% for 1999-00, and 3.8% for 2000-01, to bring the total average cost (Base Cost + Outlier Cost) up to a 2000-01 level.

The cost weights were calculated from blended Alberta data for 1997/98 and 1998/99. Two years of cost data were used to improve the robustness of the data (i.e. to improve the statistical reliability of the cost weights, and reduce year to year volatility). This required the application of a 3.0 percent inflation factor to the 97/98 costs to make them comparable to the 98/99 costs. The two exceptions for 2000-01 funding to using blended data were bone marrow transplants and angioplasties, where only 1998/99 data was used because of unusual changes in 1998/99.

Alberta Average Costs - If the only principle or objective for PWS funding cost weights was that they compensate CHA and CRHA for their actual costs incurred, CHA average costs and CRHA average costs could be used for each respective RHA instead of provincial average costs. However, provincial average costs are intended to provide incentive for the two regions to keep costs at an efficient level. Provincial average costs are consistent with the costs used for population based regional funding.

b. Other Costs

For most of the clinics and home services, and the high cost drugs and devices, the PWSAC relies primarily on historical data and cost estimates provided by CHA/CRHA in determining budget allocations. In this case, comparative data from other provinces, where available, is important to verify that the unit costs used for funding purposes are reasonable. Further refinement of costing information will be useful in updating previously used prices/costs.

3. High Cost Drugs Expenditure

Budget requirements for High Cost Drugs are determined by CHA and CRHA from a standardized drug expenditure projection model. The budget requirements, including a separate line item for drug distribution costs, are then provided to PWSAC for review and funding consideration.

C. Specific Funding Considerations

In addition to the general factors taken into consideration in determining PWS funding, for some PWS items specific considerations are made.

1. Inpatient Services

a. Organ Transplants

Projected volumes of inpatient services by Alberta Health and Wellness are based primarily on trend extrapolations of historical activity, taking into consideration any changes in the underlying volume drivers. Because the rate of organ transplantation is donor dependent, the trend growth rate for organ transplants has been relatively constant, but may increase if the major national and Alberta efforts currently underway to increase the procurement of organs successfully raise the donor rate. Donor rates may also be impacted by new technology, such as the removal of living donor kidneys via laparoscopic surgery, or the use of split livers from living donors. Increases in the rate of kidney transplant will impact on dialysis demand.

Kidney/pancreas transplants were newly funded by Province Wide Services in 2000-01. A total volume of 24 kidney/pancreas transplants (12 for each centre) was based on a target of 8 per million. Because no Alberta Costing Partnership cost was available, a regionally provided cost estimate was used.

b. Trauma and Burns

The non-elective PWS trauma services, in total, have been relatively stable over time (with the exception of 1994/95 when they dipped down), growing basically with the population increase. The PWS burns activity has an even flatter trend, fluctuating around a mark of 42 procedures annually.

c. Neurosurgery

The neurosurgery services funded by Province Wide Services grew, in total, at a remarkably steady rate of 1.5 percent annually over the four year period 1994/95 to 1997/98 (the population growth rate over this same period was 1.7 percent). The bump up in 1998/99 (6.6% growth) was the result of concerted efforts by both CHA and CRHA to reduce waiting times by hiring new physicians and making available more hospital beds. Both regions have argued that large increases will continue after 1998/99. The 2000-01 funding recommendations incorporate annual average growth of 4.2 percent from 1998/99. The growth rate should then stabilize to population growth, unless new treatments (e.g. for epilepsy or Parkinson's) have a significant impact.

d. Cardiovascular Procedures

2000-01 recommended volumes for *coronary artery bypass graft* (**CABG**) *procedures* were determined using a *population target.* The first step was to derive the cardiovascular service population for CRHA and CHA using the same methodology as in the previous year. Based on historical cardiovascular access patterns, the number of active AHCIP registrations (age 20+) in each region, as of March 31, 1999, were assigned to CRHA and CHA according to the following rules:

- ✓ regions 1-5 to CRHA
- ✓ regions 8-17 to CHA
- ✓ region 6 (David Thompson) split between CRHA (85%) and CHA (15%)
- ✓ region 7 (East Central) split between CRHA (20%) and CHA (80%).

The resulting service population total for each of CRHA and CHA was then multiplied by projected growth factors to bring the population up to the mid point of the funded year.

Determining the "right" cardiac intervention target rate to be applied to the derived service population is very difficult. Risk factors and service utilization are limited as measures of need. The CABG population benchmark target chosen for 2000-01 funding was 70 per 100,000, based on a projection of the historical activity trend. In other words, the population benchmark targets were only used as a means of achieving equity in funded services between CRHA and CHA - assuming similar risk

populations are served by CHA and CRHA. The target rate of 70 represents an increase from the 1998/99 actual rate of 65.6 CABGs per 100,000 population age 20+.

For **angioplasties**, recommended PWS volumes for 2000-01 recognize differences between the two centres (e.g. CHA does more neurosurgery, while CRHA does more angioplasty). Previous (99/00) funding had more-or-less equalized CHA and CRHA for angioplasties because the angioplasty volume done by CHA was unknown due to data problems. The 2000-01 recommendations, however, recognize the difference between the two centres, although the recommendations are based on some closure of the large gap between CHA and CRHA. This was reflected in a low growth rate for CRHA and a high growth rate for CHA – CHA was recommended for 206 more angios than their 1998/99 actual.

One data difficulty that has been encountered in the funding calculations for angioplasty services, is that many angioplasty procedures for CHA have not being properly grouped for identification as Province Wide Services because of incorrect coding. Moreover, some angioplasty procedure transfers were being recorded in CHA as an outpatient procedure. CHA has had to provide data for these procedures which has been unverifiable by Alberta Health and Wellness.

In terms of inter-provincial benchmarks, Alberta ranks lower than the rates recommended in Ontario for heart surgery, but higher than rates recommended in Ontario for angioplasty. The Advisory Committee is encouraging further discussion around the issue of the most appropriate numbers to be performed in Alberta and the right balance between heart surgeries and angioplasty.

In determining the cardiovascular procedure volumes, it was originally intended to also get some input for the Cardiovascular Task Force, which was established in 1997 with a mandate which included: *to provide advice / recommendations on the volume, type and location of cardiac services to be delivered in Alberta.* The expectation is still that the Task Force, with its considerable experience and expertise in this area, will contribute significantly to the current process and the need for good standardized data.

Funded PWS volumes should also take into account *waiting lists.* Cardiovascular surgery/angioplasty is probably the area where there is the greatest concern over waiting times. Additional funding has resulted in some decrease in waiting times and waiting lists since 1997, but not as much as expected. While more cardiovascular procedures are being performed, the demand is increasing. To understand this, good information is needed about criteria, priorities, and outcomes. The waiting times and waiting lists will continue to be monitored and factored into recommended budget volumes.

The regions have indicated they would prefer to do the work of developing standardized cardiac measures, including wait lists, through the expertise of the Cardiovascular Task Force.

e. Neonatolgy

The PWS neonatology services (low birthweight) have been growing at a faster rate in CRHA since 1994-95, due to the higher growth rate in the number of births in Calgary and southern Alberta. Recommended volumes for 2000-01 represent average annual growth, since 1996-97, of 4.5 percent for CRHA, and 3.0 percent for CHA.

f. Oncology

Approximately 60 percent of the PWS funded oncology services occur in CRHA. In CHA, more of these services are provided by the Alberta Cancer Board. Projections of activity are complicated because of the overlap with the Alberta Cancer Board.

2. Clinics and Home Services

a. Dialysis

CHA/CRHA provide in-centre dialysis, home dialysis, satellite hemodialysis and dialysis clinics. For 2000-01 funding, it was decided to provide dialysis funding in one lump sum to each of CHA and CRHA, instead of by modality (hemodialysis, peritoneal dialysis, clinics), to encourage cost effective and beneficial use of resources.

Dialysis represents the largest single Province Wide Service in terms of funding dollars ($48.9 million 2000-01). Moreover, the chronic kidney failure and dialysis service population is a very high growth area. It is therefore very important to derive accurate volume forecasts and precise unit cost estimates for dialysis.

The ultimate goal for dialysis funding is to allocate a provincial expenditure between CHA and CRHA on a population basis, perhaps with clinical guidelines. In the interim, because of concerns over data quality and the lack of a good understanding of what is happening in this area, dialysis funding for 2000-01 simply represented a 26.0 percent increase from 1999-00 funding amounts for both CHA and CRHA. This large increase partially recognized that for 1999-00 funding only the direct costs (CRHA/CHA average) were used for funding.

To make accurate forecasts of funding requirements for subsequent funding years, the starting point will be a good standardized dataset, including activities, costs and quality indicators. The challenge will also be to analyze the differences between CHA and CRHA, and the cost drivers. The dialysis cost drivers, which need to be better understood, include:

- at risk population (growth rate of persons with kidney failure)
- expanded services
- deeper penetration into rural regions via the satellite units
- shifts between peritoneal and hemodialysis
- transplant rates (improved kidney transplant volumes can have a very significant impact on the demand for dialysis)

In terms of costs, dialysis cost estimates will be available from the Alberta Costing Partnership through the ACCS costing initiative for future funding calculations.

It is also important to understand how Alberta compares to inter-provincial and international benchmarks.

Some of this understanding and analysis should be assisted by the Renal Task Force, which was mandated to provide advice and recommendations to the CHA and the CRHA, which in turn presents the information and/or submission to PWS and the PWSAC for consideration. The Task Force is to provide advice and recommendations on:

1. the volume, type, and location of renal services to be delivered in Alberta;
2. provincial guidelines concerning waiting times, access, appropriateness and outcome measures for renal services;
3. a standardized method of data collection, management and analyses of renal services data;
4. guidelines concerning education and research to enhance the delivery of high quality renal services in the province; and
5. other related issues and directions to create the efficient and effective delivery of renal services in Alberta.

Satellite Costs - To improve access to dialysis, satellite clinics are operated across Alberta by both the Northern and Southern Alberta Renal Programs. PWS funding only covers the operating costs for these satellite clinics. The direction given from Alberta Health in the past is that the local health care facilities are expected to provide the space and all hospitality related services for the satellite program.

b. Pre and Post Transplant

Substantial new PWS funding for pre and post transplant activity was approved for 1999-00, based on the recommendations of the Health System Funding Review (Laing) Committee. For 2000-01, total pre and post transplant funding is the Laing $8 million, with $1 million of this amount put into the unallocated contingency for application when a better understanding of the CHA/CRHA split is obtained. In order to determine an appropriate funding level and regional allocation, precise/standardized/trackable activities and costs must be established for both CHA and CRHA, with ratification that funded services appropriately fall under the PWS umbrella.

Pre and Post Transplant Qualifying Guidelines:

1. Activities must be directly related to PWS transplant services.

2. Types of activities must be provided only by CHA/CRHA.

3. Any items being captured in the ACCS outpatient data set should be excluded, because CHA/CRHA will receive import credit for that activity under population based funding.

4. All costs of the activities must only be those related to PWS transplant services.

5. Activities and their costs must be trackable so they can be reported to PWSAC on a regular basis.

c. Medical Genetics

A lack of program/outcomes data has hampered decision making for Medical Genetics funding. Although the CHA/CRHA document provided in September 1998 was a big improvement in supplied information, a better reporting template and improved accountability are still required. Required for funding is a commitment by Capital/Calgary to provide some kind of standardized data on these services, and to put in place data reporting systems to measure outcomes.

Key pieces of information missing are comparative data (benchmarks) with other provinces, utilization by region of residence, outcomes (penetration rates, number of counselled patients, estimated future health treatment savings, etc.) and how the Medical Genetics funds are actually spent (e.g. workload measures).

In terms of outcomes, the PWSAC has informed/encouraged Edmonton and Calgary to provide more evaluation of the costs and benefits for various components of medical genetics. Given the many competing areas for additional health funding,

a strong evidence-based business case would greatly assist in maintaining or obtaining additional funding for medical genetics. A PWS genetics task force has been proposed to begin work on some of these issues.

d. Cancer Genetics

PWS funding for Cancer Genetics began with interim funding for 1998-99. Funding does not include the research component (cancer genetics database) which was part of the Cancer Genetics Program pilot project funded by Alberta Health in 1997-98.

e. HIV Clinics

Budget requirements for the two HIV clinics are determined by CHA and CRHA and provided to the PWSAC. In light of substantial overfunding for 1998/99 ($184,000 CHA, $255,000 CRHA), until a better understanding is obtained of the expenditure profile of the clinics and the relevant cost drivers, funding for 2000-01 was based on lower growth (28% CHA, 17% CRHA) from the 1998/99 actuals compared to the regional projections. It is recognized that there has been a large upward shift in patient load in recent years due to improved mortality resulting from the effectiveness of the HIV drugs.

f. PADIS (Poison and Drug Information Service)

Budget requirements are determined by CRHA, and for 2000-01 include new funding for employee benefits and the Toxline. Volume increases for PADIS services have the following components:

- population growth
- penetration (calls per 1,000 population) growth

Since PADIS is fairly well established (i.e. relatively stable penetration rate), the program is assumed to be basically growing with population, plus an inflation factor.

In terms of outcomes, at a relatively small cost ($1.8 million annually), PADIS provides major demonstrable benefits - saved lives, reduced hospital emergency and physician visits (seventy percent of poison exposures can be safely managed at home).

g. Home Enteral Nutrition

The PWS funding allocation for 2000-01 was based on 1999-00 funding ($846,000 for each of CHA and CRHA) plus 5.0 percent. Criteria, workloads and a reporting template still need to be standardized as much as possible.

h. Perinatal Outreach

The PWS funding allocated for 2000-01 was prior year funding plus 9.1 percent. Not funded was the CHA request for an additional $40,300 for a data/computer analyst (0.4 FTE).

i. COMPRU

"Transitional" PWS funding of $250,000 was provided in 1997-98 and 1998-99 for COMPRU (Craniofacial Osseointegration and Maxillofacial Prosthetic Rehabilitation Unit), pending availability of more detailed financial data on the more high tech high cost components of the program. Detailed budget estimates for 1998-99 were provided by the CHA in 1998.

COMPRU consists of three distinct components: osseointegration procedures, non-osseointegration procedures and clinical maintenance procedures. PWS funding for 1999-00 was allocated only for COMPRU's osseointegration component (the higher cost component - $18,553 per procedure) in order to restrict funding to items clearly meeting the PWS criteria and not done in regions outside of CHA. The non-osseointegration component includes maxillofacial prosthetics, speech appliances, autogenous ears and diagnostic procedures, while the clinical maintenance component provides ongoing maintenance and prostheses reconstruction.

For 2000-01, funding was for 32 in-province COMPRU cases (CHA projection), funded at the previous year's established price ($18,533) times cost inflation (3.8%).

j. Children with Complex HealthCare Needs (CCHN)

CCHN is a unique program among Province Wide Services - the primary goal is to provide professional and financial support to the RHA Home Care programs where children with complex healthcare needs reside, to enable the RHAs to meet these children's highly specialized needs in a cost effective manner. Outcomes may also include benefits to the families of these children from having the children at home.

The Pediatric Advisory Team (PAT), comprised of multidisciplinary representatives from CHA, CRHA and rural Alberta and chaired by a CRHA Community Care Services administrative leader, conducts quarterly reviews of

applications for CCHN funding. PAT ensures that before funding is approved the program eligibility criteria are met - the presence of an ongoing (greater than 3 months) life threatening healthcare need where the family has no insurance or alternative sources of funding to cover the extraordinary costs. PAT approves the type and amount of care given.

Annual budget projections for CCHN are prepared by PAT, and include an amount for CRHA administration. PWS funding is based on the PAT projections, taking into consideration that the PAT estimates are high because they include funding for every month for each child, even though it is known that funding will not be needed for each month because of death, hospitalization, medical improvement, availability of caregivers, or other reasons. However, PAT needs to ensure the funds are there if needed. Projecting funding needs for this service is also difficult because with just a few children in the program (approximately twenty), the addition or deletion of just a couple more children can have a significant impact percentage-wise.

Recommended PWS funding for 2000-01 was an Alberta Health and Wellness projection (the PWS budget must reflect the best estimate of expenditures, not an estimate based on full utilization), and included a $700,000 transfer from population-based funding (home care pool) to cover the first $3,000/month for these children (previously paid by the home RHA).

PWS funding for CCHN is allocated to CRHA, who act as "bankers" for the program - the RHAs submit their invoices to CRHA for review and payment. Given the peculiar nature of this program, a restricted funding option for this program was reviewed by Alberta Health in 1998. Although restricted funding was deemed undesirable, since no one gains if qualifying children are refused funding, a "general understanding" should exist that funding will be found (perhaps from unallocated surplus) if the need (reasonable) exceeds budgeted funds.

k. Sleep Disorders Testing

Province Wide Services has undertaken a three year sleep disorders pilot project for Alberta. This includes PWS funding of $1.5 million annually, beginning 1998-99, for sleep disorders diagnostic testing. Funding is provided to the two regional sleep centres in CHA and CRHA ($750,000 each), and only covers Level I polysomnograph (PSG) testing, including the partial and short PSGs for pediatric cases. It does not cover Level 3 testing.

The split between the adult and pediatric Level 1 tests in each region will be monitored given the higher unit costs generally associated with pediatric testing. Regular cost updates for the Level 1 tests should be provided by CHA/CRHA for use in the funding determinations.

Before the 2001-02 PWS funding recommendations are determined, an evaluation of the pilot sleep program will have to be made.

I. ECLS

PWS funding to CHA for Pediatric and Neonatal ECLS (Extra-Corporeal Life Support) began in the 1999-00 budget year, based on the number of projected cases and unit costs as supplied by CHA. 1999-00 funding also included $30,000 for one time costs.

3. High Cost Drugs

The 2000-01 funding recommendation for High Cost Drugs represents a smaller increase than regionally projected. The regional submissions projected a total drug budget that was 80% higher than the comparable 19998/99 reported actual. In light of this extremely high two-year increase (high in absolute terms and also relative to the historical growth rate), it is felt that the projection model needs review.

a. HIV drugs

These drugs are only dispensed through the Southern and Northern Alberta Clinics, and cannot be prescribed by general practitioners. The current list of drugs covered are: Zidovudine (AZT), Lamivudine (3TC), Stavudine (d4T), Zalcitabine (ddC), Didanosine (ddI), Indinavir, Saquinavir, Ritonavir, Nelfinavir, Abacavir, Efavirenz, Nevirapine, Delavirdine, and Fortovase.

Because of the effectiveness of drug treatment, the number of AIDS diagnoses and deaths dropped dramatically in 1996 and 1997. This has had a big impact on the HIV drug budget growth rate. Funding for 2000-01 represents an average annual increase of 29.5 percent from the1998/99 actual.

b. Flolan

Funding for Flolan was proposed at the August 26, 1999 meeting of the PWSAC. It was recommended that Province Wide Services fund continuous long term Flolan therapy for primary pulmonary hypertension (New York Heart Association Functional Class III or IV despite optimal medical therapy) initiated by specified PPH specialists. PWS does <u>not</u> fund Flolan for pediatric patients with pulmonary vascular disease and congenital heart defects, as contained in the joint regional proposal (June 18, 1999), which are unapproved indications.

For 1999-00, funding was intended to cover four patients for each of CHA and CRHA, with an additional two patients each funded for 2000-01. Four new patients annually is one more than the evidence of incidence outside of Alberta.

CRHA/CHA will be required to report each year on **outcomes** for each Flolan patient. Flolan funding for subsequent years will be based on a review of the results for these patients, and also additional evidence from other jurisdictions.

4. High Cost Devices

PWS funding for high cost devices is based on a projected volume times a unit cost.

Funded implantable cardiac defibrillators (ICDs) include new and replacement ICDs. Since CHA has historically performed fewer ICDs, their replacement level should be lower than CRHA. Also, manufacturer rebates on replacement devices should be taken into consideration in determining an average ICD cost.

5. Teaching and Research

PWS funding for Teaching and Research is intended to compensate CHA and CRHA for the higher average costs per case (in-patient and out-patient) associated with the additional costs incurred by their teaching hospitals. This is a difficult cost to quantify.

In the work of the Health Services Funding Advisory Committee and the *Review of Province-wide Health Services in Alberta* (1996 Green Report), a previously derived amount of $25.6 million for medical education and research was included in proposed PWS funding, while noting that the issue of the teaching and research funding adjustment needed to be further considered.

A small working group, headed by Dr. Tyrrell, was formed in June 1997 to review funding adjustments for the indirect costs of medical education, consider alternatives, and recommend the appropriate level of funding. At the August 1997 PWSAC meeting, the task group reported that they supported an adjustment of 7 percent of acute funding. However no work was done to review costs and link the monies to identifiable items.

The $25.6 million amount for PWS Teaching and Research therefore continued from 1997-98 to 1999-00, with CHA and CRHA receiving set amounts ($15.7 million and $9.9 million, respectively).

Based on a broad review, a methodology (below) was proposed and utilized in the 2000-01 funding recommendations for estimating Teaching and Research indirect costs.

Proposed Methodology for Estimating Teaching and Research Indirect Costs

The indirect costs for medical education are calculated as 7 percent of CHA's acute care budget, and 4.94 percent of CRHA's acute care budget. The lower rate for CRHA is based on the fact that its university site has about 71 percent fewer clinical trainees compared to CHA.

The acute care budget includes the following expense items from the CRHA and CHA financial statements (consolidated statement of operations):

- inpatient services
- ambulatory care services
- diagnostic and therapeutic services

PWS funding is subtracted from these expenditures since the PWS cost weights already reflect the higher costs of the teaching hospitals. The resulting total is multiplied by 50 percent to estimate the CHA/CRHA services provided by teaching units.

Because the calculation is based on historical financial information, the final step in the methodology is to apply appropriate annual inflation factors to the estimated indirect costs of teaching and research, to bring them up to the funded year.

This methodology requires further evaluation to assess volatility and other factors. Because the methodology calculates the teaching costs from a total hospital cost base, it is recognized that the percentage of services provided by teaching units may decrease if teaching increases do not keep pace with the overall acute care budget increases. This problem could be dealt with by adjusting the percentage of services provided by teaching units used in the funding calculation, or by fixing the teaching and research adjustment for one year and then applying inflation rates for subsequent years.

6. Equipment

All regional health authorities, including CRHA and CHA, receive provincial funding for their equipment requirements through the general population-based funding allocation. PWS funding also contains a line item to cover all the additional

requirements for equipment that CRHA and CHA must utilize to deliver PWS services. This funding is intended for the regular replacement of existing PWS equipment stock, and for additional equipment to meet growing demand in such areas as dialysis.

PWSAC recommended (September 1998) that the funding for PWS equipment be based on a regular 7.5 year replacement plan for all PWS equipment. To establish the total dollar amount of capital equipment in each region, PWS equipment lists were submitted by CHA and CRHA in 1998. Based on these inventories, the PWS capital equipment base used for determining funding was established at $26.5 million for CHA and $26.4 million for CRHA. Based on these amounts, and a 7.5 year replacement cycle, **recommended equipment funding is $3.5 million annually to each of CHA and CRHA, plus an amount of $0.5 million each to cover incremental equipment, particularly dialysis equipment**. Due to resource constraints in 1999-00, total PWS equipment funding was left at $5.0 million, rather than the recommended $8.0 million. However, the full $8.0 million was included in the budget recommendations for 2000-01.

The Alberta Health and Wellness annual recommendations for lottery funding to CHA/CRHA for equipment purchases take into consideration the level of the PWS equipment funding allocation.

7. CPAP Devices

Province Wide Services has undertaken a three year sleep disorders pilot project for Alberta. Specifically, PWS funding is provided for sleep disorders *diagnostic testing* (see Sleep Disorders Testing - page 26), and related *CPAP (Continuos Positive Airway Pressure) treatment*.

CPAP funding represents the only PWS funding that goes directly to an entity other than CHA or CRHA. Alberta Aids to Daily Living (AADL) is allocated PWS funding of $0.9 million annually, beginning 1999-00, to manage the distribution of CPAP treatment devices.

The funded CPAP devices are only provided in direct association with the Level I sleep disorder testing funded through PWS. To be eligible for a publicly funded CPAP device, satisfactory diagnostic documentation of sleep and respiration is required based on full overnight Polysomnograph (PSG) from one of the Level 1 sleep labs of CHA and CRHA. This means that the funded sleep labs are currently the only point of access for the publicly funded CPAP devices.

CPAP prescription was restricted to *publicly funded* Level I testing to help control demand (there has been explosive growth in other provinces) and to keep private insurers in. Restriction to Level I testing also allows for standardized guidelines.

ASDA (American Sleep Disorders Association) has no official practice guidelines or standards on the role of intermediate levels of sleep testing (Level 3) in the prescription of CPAP. It is also felt that restriction to Level I testing will contribute to better patient care by ensuring that only qualified sleep physicians prescribe CPAPs. Level 1 testing is also optimal in determining correct CPAP titration (current ASDA standards dictate polysomnogram CPAP titration as optimal management). Moreover, the increasing awareness of sleep disorders has resulted in the referral of more medically complex patients for sleep studies, and more patients with subtle but highly symptomatic forms of sleep disorders, which require more sophisticated data acquisition techniques. Such patients may not be adequately served if evaluation is conducted solely on the diagnosis of sleep disorders using portable recorders (Level 3).

Another $0.1 million in CPAP funding goes directly to CHA and CRHA ($50,000 to each center) for the employment of a CPAP Coordinator on a 0.8 FTE basis. The coordinator is to work in partnership with the AADL CPAP Program Consultant to facilitate implementation of the criteria based, compliance driven CPAP Program, including the fulfillment of the requirements of the PWS Sleep Program Evaluation Framework. Coordinators will provide access to all PWS funded Level 1 sleep labs.

The level of total PWS funding for CPAPs was based on the following factors: the number of patients that can be tested with the PWS Level 1 funding, the estimated proportion (approximately 60%) that are expected to be diagnosed with Obstructive Sleep Apnea for which the nasal CPAP device is the typically prescribed treatment, the unit cost of the machines (including initial mask and head gear), administrative costs (CPAP coordinator positions within each of the two sleep centres), and the number of machines that can be re-cycled for patients who do not meet minimum compliance guidelines.

8. Unallocated Contingency

Within the initial PWS budget, a small amount of funding is set aside and designated as the *unallocated contingency*. These funds are not intended to provide adjustments to initial budget allocations for established services. They are primarily for addressing outstanding issues - to provide flexibility for items for which there is insufficient information to make a funding decision when PWS funding is determined prior to the beginning of the fiscal year. The unallocated contingency can also be used for meeting new needs which arise during the fiscal year. If the unallocated contingency remains unallocated at year end, the monies are split between CHA and CRHA.

ACCOUNTABILITY

Any public funding is a trust, requiring accountability.

PWS funding should only be provided for services that are effective, delivered efficiently and equitably, monitored and reported. Accountability is particularly important for Province Wide Services which represent some of the most costly health services, where some regions, providers or patients may benefit disproportionately relative to the rest of the population.

- **Effective services**

Accountability for Province Wide Services begins with appropriate funding recommendations by the PWSAC. Over time, as more information is developed and gathered on outcome/performance measures and benchmarks, improved accountability for province-wide services will be achieved.

- **Efficient and equitable service delivery**

After the PWS funding allocations have been made, accountability extends to the actual use of these funds. Under Alberta's regionalized health system, the Regional Health Authorities have responsibility for health services delivery. They must ensure that health services are delivered in a way that best meets the health care needs of the population (the provincial population in the case of Province Wide Services), within available funding. This may involve contracting out a service to private health care providers, or service delivery by the regional health authority itself.

The Department of Health and Wellness generally does not "micro-manage" the delivery of health services in this de-centralized system. The responsibilities of the central ministry are to allocate resources to health authorities and health service providers; set overall direction, policies and provincial standards; and ensure the delivery of quality health services. In essence, the Alberta Government has redefined its role from direct service provider to setting strategic direction for the health system.

In keeping with this philosophy, the provincial funding provided to regional health authorities is of a general block fund nature (i.e. funding for a basket of services), with regions maintaining the flexibility to determine their specific expenditure priorities. Although Province Wide Services funding is calculated on a specific service by service basis, CHA and CRHA are not strictly tied to the funded volumes. They have the freedom and flexibility to shift PWS funds between PWS categories

during the course of the fiscal year to meet their determined needs and expenditure priorities.

- **Monitoring and reporting**

CHA and CRHA are required to report to Alberta Health and Wellness on a six month interim and an annual basis, for all province wide services activity, according to established reporting templates.

During the fiscal year, after the budget allocations have been set, CHA and CRHA should alert the PWSAC to service areas which could substantially exceed their budget allocations, to permit a discussion of how to best manage the underfunded activity.

Although CRHA and CHA have the freedom and flexibility to shift PWS funds between PWS categories during the course of the fiscal year, data on actual expenditures, volumes and outcomes are reported and reviewed by Alberta Health and Wellness. At year end, this data is used for a service-by-service reconciliation of the funds allocated based on funded activities and previously identified costs. Total PWS funding to CHA or CRHA that exceeds their total PWS service delivery costs is to result in funds being recovered by Alberta Health and Wellness.

The PWSAC annual report is also a measure for achieving accountability for Province Wide Services.

APPENDIX A

Province Wide Services Advisory Committee - Membership List

Members and Resource Staff
Dr. Clarence Guenter Chair, Province Wide Services Advisory Committee
Mr. Dalton Russell Northern Lights Regional Health Authority
Mr. Bryan Judd VP Corporate Support Services, David Thompson Health Region
Mr. Richard Van Orman Palliser Regional Health Authority
Ms. Sheila Weatherill President and CEO, Capital Health Authority
Ms. Michelle Lahey Chief Operating Officer, University of Alberta Hospital Site (CHA)
Mr. Allaudin Merali VP Finance, Capital Health Authority
Dr. Bob Bear Executive VP & Chief Clinical Officer, Capital Health Authority
Dr. Chris Eagle Senior Operating Officer – Acute Care, Calgary Regional Health Authority
Mr. Jack Davis President and CEO, Calgary Regional Health Authority
Mr. Howard Waldner Executive VP & Chief Operating Officer, Calgary Regional Health Authority
Dr. Kabir Jivraj Chief Medical Officer, Calgary Regional Health Authority
Ms. Gayle Gorrill Interim VP & Chief Financial Officer, Calgary Regional Health Authority
Dr. Grant Gall Dean – Faculty of Medicine, University of Calgary
Dr. Lorne Tyrrell Dean, Faculty of Medicine & Oral Health Sciences (U of A)
Dr. J.M. Turc President and CEO, Alberta Cancer Board
Dr. Tony Fields Director, Cross Cancer Institute
Dr. Gavin Stuart VP, Tom Baker Cancer Centre
Mr. Rick Boyd VP Finance & Administration, Alberta Cancer Board

Members and Resource Staff
Ms. Kim Kerrone PWS, Calgary Regional Health Authority
Ms. Pat Breakey Manager - Province Wide Services, Capital Health Authority
Mr. Aslam Bhatti Chief Financial Officer, Alberta Health and Wellness
Mr. Tapan Chowdhury Senior Team Leader - Health Resourcing, Alberta Health and Wellness
Mr. Dennis Stang Senior Health Economist - Health Resourcing, Alberta Health and Wellness
Ms. Chris Brown Policy Analyst - Health Resourcing, Alberta Health and Wellness

APPENDIX B

Inpatient Refinement Group Numbers (RGNs) Funded By Province-Wide Services

RGNs	DESCRIPTION
0010	Craniotomy Except For Trauma with No Complication Comorbidity
0011	Craniotomy Except For Trauma with Class C Complication Comorbidity
0012	Craniotomy Except For Trauma with Class B Complication Comorbidity
0013	Craniotomy Except For Trauma with Class A Complication Comorbidity
0020	Craniotomy For Trauma with No Complication Comorbidity
0021	Craniotomy For Trauma with Class C Complication Comorbidity
0022	Craniotomy For Trauma with Class B Complication Comorbidity
0023	Craniotomy For Trauma with Class A Complication Comorbidity
0040	Spinal Procedures with No Complication Comorbidity
0041	Spinal Procedures with Class C Complication Comorbidity
0042	Spinal Procedures with Class B Complication Comorbidity
0043	Spinal Procedures with Class A Complication Comorbidity
0271	Traumatic Stupor & Coma, Coma >1 Hr with Class C Complication Comorbidity
0272	Traumatic Stupor & Coma, Coma >1 Hr with Class B Complication Comorbidity
1030	Heart Transplant with No Complication Comorbidity
1031	Heart Transplant with Class C Complication Comorbidity
1032	Heart Transplant with Class B Complication Comorbidity
1033	Heart Transplant with Class A Complication Comorbidity
1040	Cardiac Valve Procedure with Card Cath with No Complication Comorbidity
1041	Cardiac Valve Procedure with Card Cath with Class C Complication Comorbidity
1042	Cardiac Valve Procedure with Card Cath with Class B Complication Comorbidity
1043	Cardiac Valve Procedure with Card Cath with Class A Complication Comorbidity
1050	Cardiac Valve Procedure without Card Cath with No Complication Comorbidity
1051	Cardiac Valve Procedure without Card Cath with Class C Complication Comorbidity
1052	Cardiac Valve Procedure without Card Cath with Class B Complication Comorbidity
1053	Cardiac Valve Procedure without Card Cath with Class A Complication Comorbidity
1060	Coronary Bypass with Cardiac Cath with No Complication Comorbidity
1061	Coronary Bypass with Cardiac Cath with Class C Complication Comorbidity
1062	Coronary Bypass with Cardiac Cath with Class B Complication Comorbidity
1063	Coronary Bypass with Cardiac Cath with Class A Complication Comorbidity
1070	Coronary Bypass without Cardiac Cath with No Complication Comorbidity
1071	Coronary Bypass without Cardiac Cath with Class C Complication Comorbidity
1072	Coronary Bypass without Cardiac Cath with Class B Complication Comorbidity
1073	Coronary Bypass without Cardiac Cath with Class A Complication Comorbidity
1080	Other Cardiothoracic Procedures with No Complication Comorbidity
1081	Other Cardiothoracic Procedures with Class C Complication Comorbidity
1082	Other Cardiothoracic Procedures with Class B Complication Comorbidity
1083	Other Cardiothoracic Procedures with Class A Complication Comorbidity
1100	Major Cardiovascular Procedures (pediatric) with No Complication Comorbidity
1101	Major Cardiovascular Procedures (pediatric) with Class C Complication Comorbidity
1102	Major Cardiovascular Procedures (pediatric) with Class B Complication Comorbidity
1103	Major Cardiovascular Procedures with Class A Complication Comorbidity

1120 Percutaneous Cardiovascular Procedures with No Complication Comorbidity
1121 Percutaneous Cardiovascular Procedures with Class C Complication Comorbidity
1122 Percutaneous Cardiovascular Procedures with Class B Complication Comorbidity
1123 Percutaneous Cardiovascular Procedures with Class A Complication Comorbidity
1160 PTCA with Coronary Artery Stent Implant with No Complication Comorbidity
1161 PTCA with Coronary Artery Stent Implant with Class C Complication Comorbidity
1162 PTCA with Coronary Artery Stent Implant with Class B Complication Comorbidity
1163 PTCA with Coronary Artery Stent Implant with Class A Complication Comorbidity
1913 Pancreas, Liver & Shunt Procedures with Class A Complication Comorbidity
2860 Adrenal & Pituitary Procedures with No Complication Comorbidity
2861 Adrenal & Pituitary Procedures with Class C Complication Comorbidity
2862 Adrenal & Pituitary Procedures with Class B Complication Comorbidity
2863 Adrenal & Pituitary Procedures with Class A Complication Comorbidity
3020 Kidney Transplant with No Complication Comorbidity
3021 Kidney Transplant with Class C Complication Comorbidity
3022 Kidney Transplant with Class B Complication Comorbidity
3023 Kidney Transplant with Class A Complication Comorbidity
3530 Pelvic , Radical Hyster & Radical Vulvectomy with No Complication Comorbidity
3531 Pelvic Evis, Radical Hyster & Radical Vulvectomy with Class C Complication Comorbidity
3532 Pelvic Evis, Radical Hyster & Radical Vulvectomy with Class B Complication Comorbidity
3533 Pelvic Evis, Radical Hyster & Radical Vulvectomy with Class A Complication Comorbidity
3860 Birth Weight < 1000g with No Neonate Complication Comorbidity
3861 Birth Weight < 1000g with Class C Neonate Complication Comorbidity
3862 Birth Weight < 1000g with Class B Neonate Complication Comorbidity
3863 Birth Weight < 1000g with Class A Neonate Complication Comorbidity
3883 Birth Weight 1000-2499g with Class A Neonate Complication Comorbidity
4050 Acute Leukemia without Major O.R. Procedure with No Complication Comorbidity
4051 Acute Leukemia without Major O.R. Procedure with Class C Complication Comorbidity
4052 Acute Leukemia without Major O.R. Procedure with Class B Complication Comorbidity
4090 Radiotherapy with No Complication Comorbidity
4091 Radiotherapy with Class C Complication Comorbidity
4092 Radiotherapy with Class B Complication Comorbidity
4570 Extensive Burns without O.R. Procedure with No Complication Comorbidity
4571 Extensive Burns without O.R. Procedure with Class C Complication Comorbidity
4572 Extensive Burns without O.R. Procedure with Class B Complication Comorbidity
4582 Non-Extensive Burns with Skin Graft with Class B Complication Comorbidity
4583 Non-Extensive Burns with Skin Graft with Class A Complication Comorbidity
4720 Extensive Burns with O.R. Procedure with No Complication Comorbidity
4721 Extensive Burns with O.R. Procedure with Class C Complication Comorbidity
4722 Extensive Burns with O.R. Procedure with Class B Complication Comorbidity
4723 Extensive Burns with O.R. Procedure with Class A Complication Comorbidity
4800 Liver Transplant with No Complication Comorbidity
4801 Liver Transplant with Class C Complication Comorbidity
4802 Liver Transplant with Class B Complication Comorbidity
4803 Liver Transplant with Class A Complication Comorbidity
4810 Bone Marrow Transplant with No Complication Comorbidity
4811 Bone Marrow Transplant with Class C Complication Comorbidity
4812 Bone Marrow Transplant with Class B Complication Comorbidity
4813 Bone Marrow Transplant with Class A Complication Comorbidity
4840 Craniotomy For Multiple Significant Trauma with No Complication Comorbidity
4841 Craniotomy For Multiple Significant Trauma with Class C Complication Comorbidity
4842 Craniotomy For Multiple Significant Trauma with Class B Complication Comorbidity

4843	Craniotomy For Multiple Significant Trauma with Class A Complication Comorbidity
4850	Limb Reattach, Hip & Femur Procedure, Multi-Trauma with No Complication Comorbidity
4851	Limb Reattach, Hip & Femur Procedure, Multi-Trauma with Class C Complication Comorbidity
4852	Limb Reattach, Hip & Femur Procedure, Multi-Trauma with Class B Complication Comorbidity
4853	Limb Reattach, Hip & Femur Procedure, Multi-Trauma with Class A Compiication Comorbidity
4910	Maj Jt & Limb Reattach Procedure Of Upper Extremity with No Complication Comorbidity
4911	Maj Jt & Limb Reattach Procedure Of Upper Extremity with Class C Complication Comorbidity
4912	Maj Jt & Limb Reattach Procedure Of Upper Extremity with Class B Complication Comorbidity
4913	Maj Jt & Limb Reattach Procedure Of Upper Extremity with Class A Complication Comorbidity
4920	Chemotherapy with Acute Leukemia as Sec Dx with No Complication Comorbidity
4921	Chemotherapy with Acute Leukemia as Sec Dx with Class C Complication Comorbidity
4922	Chemotherapy with Acute Leukemia as Sec Dx with Class B Complication Comorbidity
4950	Lung Transplant with No Complication Comorbidity
4951	Lung Transplant with Class C Complication Comorbidity
4952	Lung Transplant with Class B Complication Comorbidity
4953	Lung Transplant with Class A Complication Comorbidity
9150	Birth Weight 1000-2499g with Respiratory Assistance
9151	Birth Weight 1000-2499g with Prolonged Respiratory Assistance
9152	Birth Weight < 1000g with Respiratory Assistance
9153	Birth Weight < 1000g with Prolonged Respiratory Assistance

APPENDIX C

Proposal Content Requirements for New PWS

Purpose of the Proposal:
Outline the overall purpose of the proposal (e.g. a new technology, drug, device, intervention or procedure for inclusion in Province Wide Services).

Description of Proposed Service/Intervention:
Provide a short/concise description of the purpose and scope of the service/intervention, and its importance to health services in Alberta.

Category of Service/Intervention:

- **Complete Section A,** if the proposed service/intervention has been evaluated as being technologically sound, if it is a financially recognized service/intervention and the proposed request is for consideration as a Province-Wide Service only.
- **Complete Sections A and B,** if the proposed service/intervention is considered a new service/intervention and not currently funded.

Section A

Describe how the proposed service/intervention meets the following criteria:

- high tech
- high cost
- appropriate to be delivered on only one or two sites in the Province
- will serve all Albertans with similar needs regardless of location of residence (provincial access)
- comparability in scope with other services already recognized as a Province Wide Service
- probability of recognition and acceptance by other RHAs as a Province-Wide Service.
- if available, for the two most recent fiscal years provide a breakdown of the workload units by patient's region of residence and out-of-province patients.

Section B

Provide the following:

1) Background Information:

- a short description of the usual course of service/intervention, including pre- and post-care.
- a short outline of the historical development of the service/intervention.
- the availability of the service/intervention in other provinces
- epidemiological evidence of need (incidence and prevalence of disease/disability linked with demographic characteristics).
- expected outcomes of the service/intervention that can be used to assess the value-added of the service.
- a forecast of the demand for this service/intervention in the future.
- evidence that the proposed service/intervention will have an improved outcome compared to conventional methods.
- a description of any recent changes, circumstances or events that have brought associated health issues into prominence.
- anticipated change to caseload and demographic and morbidity characteristics of potential patients.
- any benchmark data regarding criteria, outcomes, costs. (Where)

2) Alternative Courses of Action:

- an outline of the pros and cons of the proposed service.
- a description of the proposed screening/assessment process for potential candidates.
- identification of other available centres for treatment in Alberta, Canada and internationally.

3) Health Technology Assessment:

- (new technology must have a technology assessment completed) – a summary of the evaluation of the service/intervention for cost effectiveness, efficacy, effectiveness and safety. The review should be completed in consultation with the Alberta Heritage Foundation for Medical Research.

4) Action Plan:

- outline the proposed management infrastructure, including identified accountabilities and roles.

5) Resource Requirements:

- a detailed three year budget. Identify all start up and operating costs, including an estimate of physician reimbursement, preoperative evaluation needs and equipment.

APPENDIX D - Province Wide Services High Cost Drug Evaluation Sheet

Generic Name (Brand Name)	
Manufacturer	
American Hospital Formulary System (AHFS) / Therapeutic Classification	
Reason for Evaluation	❑ New Drug ❑ New Indication ❑ New Funding/Implications ❑ New Formulation ❑ Appeal Previous Denial to Formulary or Restrictions
Therapeutic Products Directorate – Approved Indications	❑ Health Protection Branch (HPB) ❑ Notice of Compliance (NOC) with date issued (document should be attached)
Place in Therapy	How the Drug is used? The target population? Population Volume?
Current Formulary Agents/Treatment Alternatives	Other agents that are available (name/ generic).
Pharmacology	How does the drug work?
Pharmacokinetics	How the drug is absorbed, distributed, metabolized, and eliminated through and by the body?
Dosage	Information on both Adult and Pediatric population (where relevant).
Dosage Adjustments Necessary	Types of patients were the above section does not apply (e.g., kidney failure).
Dosage Formulations Available	Form of the drug administered (e.g., tablet, capsule, IV, Injection etc.).
Adverse Effects	What are the side effects of the drug?
Drug Interactions	
Efficacy	Points covered: Study Design, # of patients, dosage regime, efficacy results, and safety results.
Ancillary Impact	Overall impact on other Health Resources or PWS (e.g., lab, increase/ decrease drug usage, LOS).
Pharmacoeconomics	Provide a Cost/ Benefit Analysis and Unit Cost.
Therapeutic and Economic Analysis/ Evaluation	Advantages and Disadvantages 1. Clinical and Economic Outcomes and Measures. 2. Patient Satisfaction. 3. Humanistic (e.g., QOL, ethical considerations).
Outcome Measures/ Benchmarks (locally, provincially, nationally, and internationally)	❑ Mortality/ Morbidity/ Survival Volumes ❑ Rejection Volumes ❑ Readmission Volumes ❑ Other _____. ❑ Year of Initial Therapy_____.
Resource Requirements	❑ 3-5 Year Budget forecast ❑ Start-up/ operating costs ❑ Other _____. ❑ Population Breakdown (e.g., region of residence) ❑ Trend Analysis (cost, funding, & demographics)
Funding Mechanisms	❑ Emerging Drug Fund ❑ Drug Benefit List (DBL) ❑ Manufacture Sponsored Programs ❑ Other _____.
Proposal and Recommendations	What is being done and by whom (accountability)?
References	Pertinent research or clinical articles and Peer-reviews.

Date Approved: _____.
Prepared By: _____.
Reviewed By: _____.

APPENDIX E

2000-01 PWS BUDGET RECOMMENDATIONS

	CHA	CRHA	TOTAL
INPATIENT SERVICES	**75,561,232**	**80,684,466**	**156,245,698**
Organ and Bone Marrow Transplants	6,386,499	9,538,465	15,924,964
Trauma and Burns	3,709,345	3,476,525	7,185,870
Neurosurgery	9,251,175	8,549,060	17,800,235
Cardiovascular	38,863,262	41,119,330	79,982,592
Neonatology	14,481,792	13,904,651	28,386,443
Oncology	2,869,159	4,096,435	6,965,594
CLINICS AND HOME SERVICES	**36,178,241**	**36,156,259**	**72,334,500**
Dialysis and Renal Program Total	25,362,000	23,568,000	48,930,000
Pre and Post Transplant	3,729,241	3,270,759	7,000,000
Medical Genetics	3,000,000	3,000,000	6,000,000
Cancer Genetics	300,000	300,000	600,000
HIV Clinics	503,000	717,000	1,220,000
PADIS	0	1,825,500	1,825,500
Home Enteral Nutritional Therapy	888,000	888,000	1,776,000
Perinatal Outreach	168,000	168,000	336,000
COMPRU (osseointegration)	616,000	0	616,000
Children w/complex Healthcare Needs	0	1,456,000	1,456,000
Pediatric Transport	440,000	163,000	603,000
Sleep Disorders - *Level 1 Tests*	750,000	750,000	1,500,000
ECLS Neonatal & Pediatric	372,000	0	372,000

	CHA	CRHA	TOTAL
HIGH COST DRUGS	**15,686,282**	**13,381,020**	**29,067,302**
Cyclosporine	4,624,000	2,508,000	7,132,000
Tacrolimus	1,301,800	1,235,800	2,537,600
Mycophenolate	1,290,000	765,050	2,055,050
Azathioprine	70,000	0	70,000
OKT-3	80,000	42,735	122,735
ATGAM	520,482	186,100	706,582
Ondansetron	125,000	0	125,000
Neupogen	150,000	87,935	237,935
HIV+ Drugs	5,359,100	6,540,000	11,899,100
HGH - Growth Hormone Deficiency	343,000	394,000	737,000
HGH – Chronic Renal Failure	139,500	162,900	302,400
Pulmozyme	850,800	625,900	1,476,700
Flolan	492,600	492,600	985,200
Distribution costs	340,000	340,000	680,000
HIGH COST DEVICES	**1,454,250**	**1,858,250**	**3,312,500**
Implantable Defibrillators	1,110,000	1,350,500	2,460,500
Cranioplasty	128,250	156,750	285,000
Cochlear Implants	216,000	351,000	567,000
CPAP DEVICES	**50,000**	**50,000**	**1,000,000**
AADL			900,000
CPAP Coordinator	50,000	50,000	100,000
TEACHING AND RESEARCH	**18,032,000**	**13,071,000**	**31,103,000**
EQUIPMENT	**4,000,000**	**4,000,000**	**8,000,000**
UNALLOCATED CONTINGENCY			**2,000,000**
TOTAL PROVINCE WIDE SERVICES	**150,912,005**	**149,150,995**	**302,963,000**